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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,762	11/26/2003	William B. Endress	03W053	7206

43076 7590 04/06/2007		EXAMINER
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CLEVELAND, OH 44115-2191	ART UNIT	PAPER NUMBER
	2624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/722,762	ENDRESS ET AL.
	Examiner	Art Unit
	Sean Motsinger	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11/26/2003_.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _1-13_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _1-13_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _11/26/2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date :

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070322

Rejections Under 35 U.S.C. 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1.   Claims 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "...machine-readable storage medium having machine readable information" should read "computer readable storage medium storing machine readable code" to properly comply with 35 U.S.C 101.

Rejections Under 35 USC 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim language "Huffman data" was never used in the specification nor the formula $2.\text{sup}.n$ therefore it is unknown how many values are to be used or what exactly applicant intends.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.   Re Claim 6 the claim language "Huffman data" was never used in the specification nor the equation $2.^n$. Since the values are variable length it is not clear what applicant intends the size of the Huffman code array to be. For the purposes of examination examiner is interpreting claim 6 to read "wherein the Huffman code array comprises multiple values."

Rejections Under 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claim 1, 12 and 13 is rejected under 35 U.S.C. 102(a) as being anticipated by applicants admitted prior art (APA).

6.   Re claim 1 the APA discloses a method for performing real-time decompression and display of Huffman compressed video data, the method comprising

implementing a personal computer to carry out the steps of: receiving the video data

(page 1 of the specification lines 25-26 note the data is received by a receiver which

decodes Huffman data); searching for a frame synchronizing code on bit boundaries

of the video data (page 9 line 24 also see figure 5); upon detecting the frame

synchronizing code for a given frame in the video data, extracting a frame number ,

Huffman levels and corresponding intensities from the given frame (see page 11 line

30 – page 12 lines 1-10 Note this discloses the prior art method for extracting a

frame number , Huffman levels and corresponding intensities from the given frame

the improvements applicant discloses are not embodied in this claim); extracting

pixel data for the given frame based on the Huffman levels and corresponding

intensities (see page 13 lines 36 - page 14 lines 15 note here is described a prior art

method for extracting pixel data based on the Huffman levels and intensities note the

imporvemtns applicant discloses are not embodied in this claim); and displaying the

pixel data in real time (page 2 lines 1-5 note real time processing is disclosed as

being previously accomplished merely not as easily as applicants improvements

which are not in claim 1).

7.   Re claim 12 the APA discloses a personal computer (see page 2 lines 1-5 note

this is possible to accomplish on a computer without a high speed processor) and

machine readable code executable by the personal computer to carry out the

method in accordance with claim 1 (see page 14 lines 5-15 page 12 lines 5-10 page

9 lines 5-15 please note that computer code is clearly used to perform functions of

the prior art)

8.   Re claim 13 the APA discloses a machine-readable storage medium having

machine readable information stored therein for, when read and executed by a

machine, carrying out the method of claim 1. (see page 14 lines 5-15 page 12 lines

5-10 page 9 lines 5-15 please note that computer code is clearly used to perform

functions of the prior art)

Rejections Under 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claim 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

APA in view of Urata US 6,128,358.

10.   Re claim 2 APA discloses the elements of claim 1. The APA does not disclose

wherein the step of searching for the frame synchronizing code comprises

comparing the received data against a plurality of predefined bit configurations.

Urata discloses wherein the step of searching for the frame synchronizing code

(synchronizing signal column 3 line 62) comprises comparing the received data

(synchronizing block column 3 line 64) against a plurality of predefined bit

configurations (detections patterns column 3 line 66). The motivation to combine is

to "...provide a bit shift detecting circuit by which a bit shift value can be assuredly

detected." (see column 3 lines 37-39.) Therefore it would have been obvious at the

time of the invention to combine the APA with Urata to reach the aforementioned

advantage.

11.   Re claim 3 Urata further discloses wherein the plurality of predefined bit

configurations each represent a valid synchronization code with a corresponding

shift (see column 4 lines 4-6 note that a corresponding bit shift is outputted after

detection.

12.   Re claim 4 the APA and Urata disclose all of the elements of claim 3 the do not

disclose wherein the step of extracting the frame number, huffman levels and

corresponding intensities comprises the step of multiplying the video data by a

power of two based on the corresponding shift. However examiner is taking official

notice that it is notoriously well know that multiplying by a power of two and bit

shifting by that power is equivalent. It is also a well known advantage to use a faster

operation when possible. Therefore it would have been obvious to one of ordinary

skill in the art to combine APA and Urata with common knowledge in the art to reach

the aforementioned advantage.

13.   Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

APA in view Thielens US 5,915,041.

14.   Re claim 5, the APA discloses all of the elements in claim 1 the APA does not

disclose wherein the step of extracting the pixel data comprises generating the

Huffman codes for each frame by presetting each value in a Huffman code array to a

known value, and subsequently overwriting a value for a given entry in the Huffman

code array with a valid intensity when a corresponding Huffman code from the

Huffman code array is extracted from the video data.

15.   Thielens discloses, wherein the step of extracting the pixel data comprises

generating the Huffman codes (creating a decoding table column 5 lines 36-40) for

each frame by overwriting a value (storing unique item figure 5 step 600) for a given

entry in the Huffman code array with a valid intensity (unique data item representing

the character column 5 lines 65-68) when a corresponding Huffman code (valid

character column 5 line 65) from the Huffman code array is extracted from the video

data (found colun 5 line 65). The motivation to combine is "to perform such decoding

in a rapid manner to provide more efficient performance" column 2 lines 20-23

16.   Theilens does not disclose presetting each value in a Huffman code array to a

known value. However it is notoriously well known in the art and examiner is taking

official notice that one of ordinary skill in the art would know how to initialize an array

i.e. "presetting each value in a Huffman code array to a known value." Therefor one

of ordinary skill in the art would find it obvious to combine the APA, Theilens, and

knowledge of one of ordinary skill in the art to reach the aforementioned advantage.

17.   Re claim 6 Thielens further discloses wherein the Huffman code array

comprises multiple values (note multiple values are clearly stored in the table see

figure 3B).

18.   Re claim 7 the APA and Thielens discloses all the elements of claim 5 the do not

disclose wherein the video data comprises high uniformity background data.

However examiner is taking official notice that it is well known to take video of the

stars, which means the video data comprises high uniformity background data. The

motivation to combine is to compress video of the stars. Therefor one of ordinary

skill in the art would find it obvious to combine the APA, Theilens, and knowledge of

one of ordinary skill in the art to reach the aforementioned advantage.

19.   Re claim 8 the APA and Thielens discloses all the elements of claim 7 and the

APA discloses use of telemetry data (note the data is being transmitted and received

see page 1 line 25) they do not disclose wherein the video data comprising stars

against the blackness of space. However examiner is taking official notice that it is

well known to take video of the stars. The motivation to combine is to compress

video of the stars. Therefor one of ordinary skill in the art would find it obvious to

combine the APA, Theilens, and knowledge of one of ordinary skill in the art to reach

the aforementioned advantage.

20.   Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the APA

in view of Astle US 5,589,829.

21.   Re claim 9 the APA discloses all elements of claim 1. APA does not disclose

wherein the video data comprises multiple channel video data and the method is

carried out with respect to each channel. However Astle discloses where the video

data comprises multiple channel video data (YUV column 5 line 1 note the method is

carried out including all the channels) and the method is carried out with respect to

each channel (YUV column 5 line 1 note the method is carried out such as to include

all the channels).

22.   Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

APA.

23.   Re claim 10 the APA discloses all of the elements of claim 1. The APA does not

disclose wherein the step of displaying the pixel data includes overlaying additional

data on top of the pixel data. However examiner is taking official notice taht

overlaying information over a video sequence is notoriously well know in such

applications as adding a time, date or subtitles. The motivation to combine would be

the advantage of having additional information on the display. Therefore it would

have been obvious at the time of the invention to combine the APA with common

knowledge in the art to reach the aforementioned advantage.

24.   Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

APA in view of Lewins US 5371533

25.   Re claim 11 the APA discloses all of the elements of claim 1. The APA does not

disclose the step of in a case where a background within the video data has high

uniformity, adjusting the intensity of at least one of the background data and target

data within the background to increase contrast. Lewins discloses the idea where a

background within the video data has high uniformity (low dynamic range column 2

lines 15-18), adjusting the intensity of at least one of the background data and target

data within the background to increase contrast (column 2 lines 13-15)

Conclusion

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sean Motsinger whose telephone number is 571-

270-1237. The examiner can normally be reached on 9-5 M-F.

27.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

28.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like

assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Motsinger
3/26/2007

JINGGE WU
SUPERVISORY PATENT EXAMINER